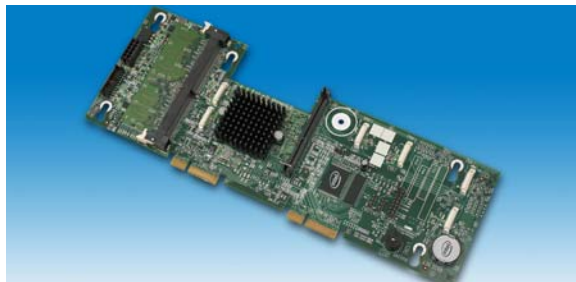


Product Brief

MegaRAID® Release 3.5 Features & Benefits

MegaRAID* Release 3.5



MegaRAID* Release 3.5 is the latest release in a new software upgrade program that provides enhanced features and functionality to existing Intel® SAS/SATA RAID controllers powered by MegaRAID technology. This program bundles the new elements across four key categories including Features and Usability, Data Protection and Availability, Performance, and Green computing.

Features and Usability

Reversible Hot Spare (Copy Back)

Reversible Hot Spare is a method of automatically restoring a hot spare and logical drive to their original configuration. After a failed drive is replaced, the former hot spare can automatically begin copying data back to the replaced drive. Once this is complete, the original hot spare regains its hot spare status in its original location. For administrators who prefer to keep their hot spare in specific slots within the

The new features and functions specifically related to MegaRAID* Release 3.5 include:

- Reversible Hot Spare
- Console Redirect
- Extensions to RAID 1
- Single Controller Multi-pathing
- Load Balancing

The Intel® RAID controllers that are supported under Release 3.5 are the SRCASBB8I, SRCASJV, SRCASLS4I, SRCASRB, and SRCATAWB.

To download the latest release, visit <http://support.intel.com>



enclosure (e.g. the far right slot), Revertible Hot Spare allows them to easily return to their preferred configuration. It also reduces or eliminates any administrator maintenance beyond replacement of the failed hard drive.

Console Redirect

Console Redirect allows administrators to manage a host (local) system from a client (remote) system by redirecting keyboard input and text output through a serial port or LAN during preboot. It is commonplace for a single monitor, mouse and keyboard to service an entire rack of servers. Without Console Redirect, the management of those servers is limited to those that are booted and running. With Console Redirect, you can bring that management functionality to the pre-boot environment. This is ideal for tasks such as configuring BIOS or RAID settings.

Extensions to RAID 1

Support for larger logical volumes Traditional RAID 1 allows configuration of only two hard drives and RAID 10 configurations of up to 16 drives. With MegaRAID extensions to RAID 1, bandwidth-intensive applications that require the redundancy of RAID 1 and the performance of RAID 10 can now benefit from much larger disk configurations. New

enhancements allow up to 32 drives per RAID 1 volume and up to 256 drives for RAID 10, improving overall system capacity and storage performance.

Data Protection and Availability

Single Controller Multi-pathing

Multipathing takes advantage of dual port drives by detecting and using multiple paths of communication. This allows for increased reliability and fault tolerance in the case where the cabling becomes faulty or disconnected, or where one port on a drive becomes inactive. In this instance, Multipathing allows the MegaRAID adapter to access the hard drive via an alternate path, thereby maintaining communication and eliminating downtime. (Note: This feature requires use of dual ported SAS drives or SATA drives with interposers)

Performance

Load Balancing

Load balancing, working in tandem with Multipathing, is a powerful feature for improving application performance. While Multipathing allows for use of multiple paths, it is Load Balancing that intelligently distributes read/write requests to the multiple paths. This maximizes throughput between the MegaRAID adapter and the hard drive, removes bottlenecks and improves overall system performance.

With communication bottlenecks removed, Load Balancing significantly improves large block sequential reads and modestly improves random writes as well. This feature is ideal for improving I/O performance in virtual tape libraries, data backup, and media streaming applications. (Note: This feature requires use of dual ported SAS drives or SATA drives with interposers)

Green

LSI* SAS1078 low power ROC

In today's data centers where storage requirements are continually growing, physical space and power are at a premium. According to Gartner, \$6 billion was spent powering data centers in the United States alone. Gartner also predicts that by the end of 2008, nearly 50 percent of data centers worldwide won't have sufficient power and cooling to support high-density equipment.**

The newest generation of MegaRAID adapters, based on the LSI SAS1078 RAID on Chip (ROC) provide up to a 25% savings in power consumption over the previous generation of adapters. Intel is committed to delivering environmentally friendly and highly-efficient products that have a positive green impact and offer economic benefits to our customers.



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**Source: SQL Server Magazine, May 2007 http://www.sqlmag.com/article/articleid/95344/sql_server_blog_95344.html

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